

APR 11 2003

SEQUENCE LISTING

<110> BUCK, Linda B
Axel, Richard

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<140> US 09/771,209

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<150> US 08/129,079

<151> 1993-10-05

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Xaa
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Xaa
100 105 110

Xaa
115 120 125

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Ser Leu Phe Tyr Ser Thr Leu Leu Gly Val Tyr Leu Ser Ser Ser Phe
180 185 190

Thr Gln Asn Ser His Ser Thr Ala Arg Ala Ser Val Met Tyr Ser Val
195 200 205

Val Thr Pro Met Leu
210

<210> 15
<211> 636
<212> DNA
<213> Rattus sp.

<400> 15
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ctcctggctg tcatggccta tgatcgatat gtggctatct gtcacccact gtattacaca 120
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ccaagtccacc tcacaatgca tcttgcacct gttatatttgc cagctatttc cctcagtggt 240
atcctttact cttatattcaa gatagtgtct tccatacgtt ctatgtcctc agttcaaggg
aagtacaagg cattttctac atgtgcctct cacctttcca ttgtctcctt attttatagt 300
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gcttcggtca tgtatactgt ggtcaccccc atgttg 360
636

<210> 16
<211> 212
<212> PRT
<213> Rattus sp.

<400> 16

Thr Ser Thr Thr Ile Pro Lys Met Leu Val Asn Ile His Thr Gln Ser
1 5 10 15

Asn Thr Ile Thr Tyr Glu Asp Cys Ile Ser Gln Met Phe Val Leu Leu
20 25 30

Val Phe Gly Glu Leu Asp Asn Phe Leu Leu Ala Val Met Ala Tyr Asp
35 40 45

Arg Tyr Val Ala Ile Cys His Pro Leu Tyr Tyr Thr Val Ile Val Asn
50 55 60

His Arg Leu Cys Ile Leu Leu Leu Leu Ser Trp Val Val Ser Ile
65 70 75 80

Leu His Ala Phe Leu Gln Ser Leu Ile Val Leu Gln Leu Thr Phe Cys
85 90 95

Gly Asp Val Lys Ile Pro His Phe Phe Cys Glu Leu Asn Gln Leu Ser
100 105 110

Gln Leu Thr Cys Ser Asp Asn Phe Pro Ser His Leu Thr Met His Leu
115 120 125

Val Pro Val Ile Phe Ala Ala Ile Ser Leu Ser Gly Ile Leu Tyr Ser
130 135 140

Tyr Phe Lys Ile Val Ser Ser Ile Arg Ser Met Ser Ser Val Gln Gly
145 150 155 160

Lys Tyr Lys Ala Phe Ser Thr Cys Ala Ser His Leu Ser Ile Val Ser
165 170 175

Leu Phe Tyr Ser Thr Gly Leu Gly Val Tyr Val Ser Ser Ala Val Ile
180 185 190

Arg Ser Ser His Ser Ser Ala Ser Ala Ser Val Met Tyr Thr Val Val
195 200 205

Thr Pro Met Leu
210

<210> 17
<211> 646
<212> DNA
<213> Rattus sp.

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<400> 17
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tgaatgcttc cttctggctg ccatggcgta tgatcgaaaa gtagcaatct gcaacccact 180
gctttattca acgaaaatgt ccacacaaatgt ctgtgtccag ttgggtgtgg gatcttat 240
agggggattt cttaatgcct cctcttttac cctttccctt tttccttgtt cttctgtgg 300
accaaataaga atcaaatcaact ttactgtga ttttgcctcg ttagtagaac tttcttgctc 360
tgatgtcagt gttcctgatg ctgttacctc atttctgtct gcctcagtttta ctatgctcac 420
agtgtttatc atagccatct cctataccta tatacctatc accatcctga agatgcgttc 480
cactgagggt cgacagaaaag cattctctac ctgcacttcc cacctcactg cagtcactct 540
gtgctatgga accatcacat tcatctatgt gatgccaaag tccagctact ccacagacca 600
gaacaaggtg gtgtctgtgt tttatatgggt ggtgatcccc atgttg 646
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<210> 18
<211> 215
<212> PRT
<213> Rattus sp.

<400> 18

Ile Gly Tyr Ser Ser Ser Val Thr Pro Asn Met Leu Val Asn Phe Leu
 1 5 10 15

Ile Lys Gln Asn Thr Ile Ser Tyr Leu Gly Cys Ser Ile Gln Phe Gly
20 25 30

Ser Ala Ala Leu Pro Gly Gly Leu Glu Cys Phe Leu Leu Ala Ala Met
35 40 45

Ala Tyr Asp Arg Phe Val Ala Ile Cys Asn Pro Leu Leu Tyr Ser Thr
50 55 60

Lys Met Ser Thr Gln Val Cys Val Gln Leu Val Val Gly Ser Tyr Ile
65 70 75 80

Gly Gly Phe Leu Asn Ala Ser Ser Phe Thr Leu Ser Phe Phe Ser Leu
85 90 . 95

Ser Phe Cys Gly Pro Asn Arg Ile Asn His Phe Tyr Cys Asp Phe Ala

100

105

110

Pro Leu Val Glu Leu Ser Cys Ser Asp Val Ser Val Pro Asp Ala Val
115 120 125

Thr Ser Phe Ser Ala Ala Ser Val Thr Met Leu Thr Val Phe Ile Ile
130 135 140

Ala Ile Ser Tyr Thr Tyr Ile Leu Ile Thr Ile Leu Lys Met Arg Ser
145 150 155 160

Thr Glu Gly Arg Gln Lys Ala Phe Ser Thr Cys Thr Ser His Leu Thr
165 170 175

Ala Val Thr Leu Cys Tyr Gly Thr Ile Thr Phe Ile Tyr Val Met Pro
180 185 190

Lys Ser Ser Tyr Ser Thr Asp Gln Asn Lys Val Val Ser Val Phe Tyr
195 200 205

Met Val Val Ile Pro Met Leu
210 215

<210> 19
<211> 481
<212> DNA
<213> Rattus sp.

<400> 19
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gctggagttc tgtgactcca atgtgattga tcattttggc tgtgatgcct ctccaaattct 180
gcagataacc tgctcagaca cggtatttat agagaaaatt gtcttggctt ttgccatact 240
gacactcatc attactctgg tatgtgttgt tctctcc tacatcacatca tcaagaccat 300
tttaaagttt ccttctgctc aacaaagaaa aaaggccttt tctacatgtt cttcccacat 360
gattgtggtt tccatcacct atgggagctg tattttcatc tacatcaaac cttcagcgaa 420
ggaaggggta gccatcaata aggttgtatc tgtgctcaca acatcagtcg cccctttgct 480
c 481

<210> 20

<211> 160
<212> PRT
<213> Rattus sp.

<400> 20

Ile Cys Lys Pro Leu His Tyr Thr Thr Ile Met Asn Asn Arg Val Cys
1 5 10 15

Thr Val Leu Val Leu Ser Cys Trp Phe Ala Gly Leu Leu Ile Ile Leu
20 25 30

Pro Pro Leu Gly His Gly Leu Gln Leu Glu Phe Cys Asp Ser Asn Val
35 40 45

Ile Asp His Phe Gly Cys Asp Ala Ser Pro Ile Leu Gln Ile Thr Cys
50 55 60

Ser Asp Thr Val Phe Ile Glu Lys Ile Val Leu Ala Phe Ala Ile Leu
65 70 75 80

Thr Leu Ile Ile Thr Leu Val Cys Val Val Leu Ser Tyr Thr Tyr Ile
85 90 95

Ile Lys Thr Ile Leu Lys Phe Pro Ser Ala Gln Gln Arg Lys Lys Ala
100 105 110

Phe Ser Thr Cys Ser Ser His Met Ile Val Val Ser Ile Thr Tyr Gly
115 120 125

Ser Cys Ile Phe Ile Tyr Ile Lys Pro Ser Ala Lys Glu Gly Val Ala
130 135 140

Ile Asn Lys Val Val Ser Val Leu Thr Thr Ser Val Ala Pro Leu Leu
145 150 155 160

<210> 21
<211> 481
<212> DNA
<213> Rattus sp.

<220>
<221> misc_feature
<222> (270)..(274)
<223> n = unknown

<400> 21
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gttggacttc tgtgggcca accgcatcaa ccatttcttc tgtgacctcc ctccatataat 180
ccagctgtcc tgctccagcg tcatttgac agaaatggcc atctttgtcc tgtccatcgc 240
tgtgctctgc atctgtttcc tcctaaccn nnnntccatc attttcatag tgtcctccat 300
tctgagaatc cttccacta ccggcaggat gaagacattt tctacatgtg gctcccacct 360
ggccgtggtc accatctact atgggaccat gatctccatg tatgtcggcc caaatgcgca 420
tctgtccccg gagctcaaca aggtcatttc tgtcttctac actgtgatca ccccaactact 480
g 481

<210> 22
<211> 160
<212> PRT
<213> Rattus sp.

<220>
<221> MISC_FEATURE
<222> (90)..(91)
<223> x = unknown

<400> 22

Ile Cys His Pro Leu His Tyr Ser Leu Leu Met Ser Pro Asp Asn Cys
1 5 10 15

Ala Ala Leu Val Thr Val Ser Trp Val Thr Gly Val Gly Thr Gly Phe
20 25 30

Leu Pro Ser Leu Leu Ile Ser Lys Leu Asp Phe Cys Gly Pro Asn Arg
35 40 45

Ile Asn His Phe Phe Cys Asp Leu Pro Pro Leu Ile Gln Leu Ser Cys
50 55 60

Ser Ser Val Phe Val Thr Glu Met Ala Ile Phe Val Leu Ser Ile Ala
65 70 75 80

Val Leu Cys Ile Cys Phe Leu Leu Thr Xaa Xaa Ser Tyr Ile Phe Ile
85 90 95

Val	Ser	Ser	Ile	Leu	Arg	Ile	Pro	Ser	Thr	Thr	Gly	Arg	Met	Lys	Thr
100								105						110	

Phe Ser Thr Cys Gly Ser His Leu Ala Val Val Thr Ile Tyr Tyr Gly
115 120 125

Thr Met Ile Ser Met Tyr Val Gly Pro Asn Ala His Leu Ser Pro Glu
130 135 140

Leu Asn Lys Val Ile Ser Val Phe Tyr Thr Val Ile Thr Pro Leu Leu
145 150 155 160

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<210> 23  
<211> 646  
<212> DNA  
<213> Rattus sp.
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<220>
<221> misc_feature
<222> (1)..(1)
<223> n = unknown
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<220>
<221> misc_feature
<222> (236)..(402)
<223> n = unknown
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<400> 23
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ggacaatttc ctgctggctg tcatggccta tgacagattt gtggccatATG gccacccttt 180
gtactacaca acaaAGATGA cccaccAGCT ctgtgtcttg ctgggtgtctg gatcannnnn 240
nn 300
nn 360
nn 420
atTTGTCTGC atcctcatct cttacatcta catcaccaat gcagtccTCA gagTCATC 480
cttttagggga ggatggaaag cttctccac ctgtggctca cacctggctg tggTCTGCCT 540
cttctatggc accatcatttgc ctgtgtatTTT caatcctgtta tcttcccattt catctgagaa 600
ggacactgca gcaactgtgc tatacacagt ggtgactccc ATGTTG 646

<210> 24
<211> 215
<212> PRT
<213> *Rattus* sp.

<220>
<221> MISC_FEATURE
<222> (79)..(134)
<223> x = unknown

<400> 24

Val Cys Phe Ser Ser Thr Thr Val Pro Lys Val Leu Ala Asn His Ile
1 5 10 15

Leu Ser Ser Gln Ala Ile Ser Phe Ser Gly Cys Leu Thr Gln Leu Tyr
20 25 30

Phe Leu Cys Val Ser Val Asn Met Asp Asn Phe Leu Leu Ala Val Met
35 40 45

Ala Tyr Asp Arg Phe Val Ala Ile Cys His Pro Leu Tyr Tyr Thr Thr
50 55 60

Lys Met Thr His Gln Leu Cys Val Leu Leu Val Ser Gly Ser Xaa Xaa
65 70 75 80

Xaa
85 90 95

Xaa
100 105 110

Xaa
115 120 125

Xaa Xaa Xaa Xaa Xaa Val Ile Met Val Thr Pro Phe Val Cys Ile
130 135 140

Leu Ile Ser Tyr Ile Tyr Ile Thr Asn Ala Val Leu Arg Val Ser Ser
145 150 155 160

Phe Arg Gly Gly Trp Lys Ala Phe Ser Thr Cys Gly Ser His Leu Ala
165 170 175

Val Val Cys Leu Phe Tyr Gly Thr Ile Ile Ala Val Tyr Phe Asn Pro
180 185 190

Val Ser Ser His Ser Ser Glu Lys Asp Thr Ala Ala Thr Val Leu Tyr
195 200 205

Thr Val Val Thr Pro Met Leu
210 215

<210> 25
<211> 646
<212> DNA
<213> Rattus sp.

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<220>
<221> misc_feature
<222> (236)..(402)
<223> n = unknown
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<400> 25 tgcgtcttc tcctccacca ctgtccccaa ggtactggct aaccacatac tcagtagtca 60
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ggacaatttc ctgctggctg tgatggccta tgacagattt gtggccatat gccacccttt 180
gtactacaca acaccgatga cccaccagct ctgtgtcttg ctggtgtctg gatcannnnn 240
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 300
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 360
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ctttagggga ggatggaaaag ctttctccac ctgtggctca cacctggctg tggtctgcct 540
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ggacactgca gcaactgtgc tatacacagt ggtgactccc atgttg 646

<210> 26
<211> 215
<212> PRT
<213> Rattus sp.

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<220>
<221> MISC_FEATURE
<222> (79)..(134)
<223> x = unknown
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<400> 26

Val Cys Phe Ser Ser Thr Thr Val Pro Lys Val Leu Ala Asn His Ile
1 5 10 15

Leu Ser Ser Gln Ala Ile Ser Phe Ser Gly Cys Leu Thr Gln Leu Tyr
20 25 30

Phe Leu Cys Val Ser Val Asn Met Asp Asn Phe Leu Leu Ala Val Met
35 40 45

Ala Tyr Asp Arg Phe Val Ala Ile Cys His Pro Leu Tyr Tyr Thr Thr
50 55 60

Pro Met Thr His Gln Leu Cys Val Leu Leu Val Ser Gly Ser Xaa Xaa
65 70 75 80

Xaa
85 90 95

Xaa
100 105 110

Xaa
115 120 125

Xaa Xaa Xaa Xaa Xaa Xaa Val Ile Met Val Thr Pro Phe Val Cys Ile
130 135 140

Leu Ile Ser Tyr Ile Tyr Ile Thr Asn Ala Val Leu Arg Val Ser Ser
145 150 155 160

Phe Arg Gly Gly Trp Lys Ala Phe Ser Thr Cys Gly Ser His Leu Ala
165 170 175

Val Val Cys Leu Phe Tyr Gly Thr Ile Ile Ala Val Tyr Phe Asn Pro
180 185 190

Val Ser Ser His Ser Ser Glu Lys Asp Thr Ala Ala Thr Val Leu Tyr
195 200 205

Thr Val Val Thr Pro Met Leu
210 215

<210> 27
 <211> 481
 <212> DNA
 <213> Rattus sp.

<220>
 <221> misc_feature
 <222> (183)..(185)
 <223> n = unknown

<400> 27
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 gttcccctac tgtggatcac ggaagatctc ccacttcttc tgtgaggtgc cctcgctgct 180
 gannntggcc tgtgcagaca ctgaaggcta tgagcaggta ctatttgtga caggcgtggt 240
 ggtcctcctg gtgcccatta cattcattac tgcctcttat gccctcatcc tggctgctgt 300
 gctccgaatg cactctgcgg aggggagtca gaaggcccta gccacatgtc cctctcacct 360
 gagagtcgtc aatctcttct atggggccct tgcctacacc tacatgttac ctgcttccta 420
 tcactcacca ggccaagacg acatagtatac cgtctttac accgttctca cacccatgtc 480
 t 481

<210> 28
 <211> 160
 <212> PRT
 <213> Rattus sp.

<220>
 <221> MISC_FEATURE
 <222> (61)..(62)
 <223> x = unknown

<400> 28
 Ile Cys Asn Pro Leu Arg Tyr Pro Val Leu Met Ser Gly Arg Val Cys
 1 5 10 15

Leu Leu Met Val Val Ala Ser Trp Leu Gly Gly Ser Leu Asn Ala Ser
 20 25 30

Ile Gln Thr Ser Leu Thr Leu Gln Phe Pro Tyr Cys Gly Ser Arg Lys
 35 40 45

Ile Ser His Phe Phe Cys Glu Val Pro Ser Leu Leu Xaa Xaa Ala Cys
50 55 60

Ala Asp Thr Glu Ala Tyr Glu Gln Val Leu Phe Val Thr Gly Val Val
65 70 75 80

Val Leu Leu Val Pro Ile Thr Phe Ile Thr Ala Ser Tyr Ala Leu Ile
85 90 95

Leu Ala Ala Val Leu Arg Met His Ser Ala Glu Gly Ser Gln Lys Ala
100 105 110

Leu Ala Thr Cys Ser Ser His Leu Thr Val Val Asn Leu Phe Tyr Gly
115 120 125

Pro Leu Val Tyr Thr Tyr Met Leu Pro Ala Cys Tyr His Ser Pro Gly
130 135 140

Gln Asp Asp Ile Val Ser Val Phe Tyr Thr Val Leu Thr Pro Met Leu
145 150 155 160

<210> 29
<211> 481
<212> DNA
<213> Rattus sp.

<400> 29
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cactgggtgc tgggtggag gcttggctgg gccagtggta gaaatttcct tggtgtctcg 120
tctcctttt tggggcccca atcacattca acacatctt tgtgatttcc cacctgtgct 180
gagcttggct tgtactgata catcagtgaa tgtcctggta gattttatta taaacctctg 240
caagatcctg gccacccccc tgctgatcct gagctccatc ttgcagataa tccgcacagt 300
gctcaagatt cttcagctg caggcaagaa gaaaggatcc tcgacttgc cctccatct 360
cactgtgggtt ctcatcttct atgggagcat cctttcatg tatgtgcggc tgaagaagac 420
ttactccctt gactacgaca gaggccttgc agtagtctac tccgtggta ccccttcct 480
g 481

<210> 30
<211> 160
<212> PRT

<213> Rattus sp.

<400> 30

Ile Cys Arg Pro Leu His Tyr Pro Thr Leu Met Thr Gln Thr Leu Cys
1 5 10 15

Ala Lys Ile Ala Thr Gly Cys Trp Leu Gly Gly Leu Ala Gly Pro Val
20 25 30

Val Glu Ile Ser Leu Val Ser Arg Leu Leu Phe Cys Gly Pro Asn His
35 40 45

Ile Gln His Ile Phe Cys Asp Phe Pro Pro Val Leu Ser Leu Ala Cys
50 55 60

Thr Asp Thr Ser Val Asn Val Leu Val Asp Phe Ile Ile Asn Leu Cys
65 70 75 80

Lys Ile Leu Ala Thr Phe Leu Leu Ile Leu Ser Ser Tyr Leu Gln Ile
85 90 95

Ile Arg Thr Val Leu Lys Ile Pro Ser Ala Ala Gly Lys Lys Lys Ala
100 105 110

Phe Ser Thr Cys Ala Ser His Leu Thr Val Val Leu Ile Phe Tyr Gly
115 120 125

Ser Ile Leu Phe Met Tyr Val Arg Leu Lys Lys Thr Tyr Ser Leu Asp
130 135 140

Tyr Asp Arg Ala Leu Ala Val Val Tyr Ser Val Val Thr Pro Phe Leu
145 150 155 160

<210> 31

<211> 481

<212> DNA

<213> Rattus sp.

<220>

<221> misc_feature

<222> (178)..(179)

<223> n = unknown

<400> 31

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tgaggatct tatatagggg gtttcttaa tactgcctc atcatgtttt acttttctc 120
ttttctcttc tgtggccaa atatagttga tcatttttc tgtgatttg ctccttnnt 180
gaaacttcg tgctctgatg tgagtgctc ttagttgtt atgtcatttt ctgctggctc 240
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cctgaagatg tcctcaactg agggccgtca caaggcttc tccacatgta cctcccac 360
cactgcagtc actctctact atggcaccat tacttcatt tatgtgatgc ccaagtccac 420
atactctaca gaccagaaca aggtgggtgc tgtgtttac atgggtggta tcccaatgtt 480
g 481

<210> 32
<211> 160
<212> PRT
<213> Rattus sp.

<220>
<221> MISC_FEATURE
<222> (59)..(60)
<223> x = unknown

<400> 32

Ile Cys Asn Pro Leu Leu Tyr Ser Thr Lys Met Ser Thr Gln Val Cys
1 5 10 15

Ile Gln Leu Val Ala Gly Ser Tyr Ile Gly Gly Phe Leu Asn Thr Cys
20 25 30

Leu Ile Met Phe Tyr Phe Ser Phe Leu Phe Cys Gly Pro Asn Ile
35 40 45

Val Asp His Phe Phe Cys Asp Phe Ala Pro Xaa Xaa Glu Leu Ser Cys
50 55 60

Ser Asp Val Ser Val Ser Val Val Met Ser Phe Ser Ala Gly Ser
65 70 75 80

Val Thr Met Ile Thr Val Phe Ile Ile Ala Ile Ser Tyr Ser Tyr Ile
85 90 95

Leu Ile Thr Ile Leu Lys Met Ser Ser Thr Glu Gly Arg His Lys Ala
100 105 110

Phe Ser Thr Cys Thr Ser His Leu Thr Ala Val Thr Leu Tyr Tyr Gly
115 120 125

Thr Ile Thr Phe Ile Tyr Val Met Pro Lys Ser Thr Tyr Ser Thr Asp
130 135 140

Gln Asn Lys Val Val Ser Val Phe Tyr Met Val Val Ile Pro Met Leu
145 150 155 160

<210> 33
<211> 479
<212> DNA
<213> Rattus sp.

<400> 33
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gctcttctct gtgttcgtta gcattgcaca tgcgttgtc cacatttaa tggtgttgat 120
actgactttc agcacaaaaaa ctgaaatccc tcacttttc tgtgagctgg ctcatacatcat 180
caaacttacc tggccgata attttatcaa ctatctgctg atatacacag agtctgtctt 240
attttttgtt gttcatattt tagggatcat tttgtcttat atttacactg tatttcctcagt 300
tttaagaatg tcattattgg gaggaatgta taaaggcttt tcaacatgtg gatctcattt 360
gtcggttgc tctgttttat ggcacaggtt ttggggtaca cataagctct ccacttactg 420
actctccaag gaagactgta gtggcttcag tgatgtacac tgtggttact cagatgctg 479

<210> 34
<211> 139
<212> PRT
<213> Rattus sp.

<400> 34

Ile Cys His Pro Leu Lys Tyr Thr Val Ile Met Asn His Tyr Phe Cys
1 5 10 15

Val Met Leu Leu Leu Phe Ser Val Phe Val Ser Ile Ala His Ala Leu
20 25 30

Phe His Ile Leu Met Val Leu Ile Leu Thr Phe Ser Thr Lys Thr Glu
35 40 45

Ile Pro His Phe Phe Cys Glu Leu Ala His Ile Ile Lys Leu Thr Cys

50

55

60

Ser Asp Asn Phe Ile Asn Tyr Leu Leu Ile Tyr Thr Glu Ser Val Leu
65 70 75 80

Phe Phe Gly Val His Ile Val Gly Ile Ile Leu Ser Tyr Ile Tyr Thr
85 90 95

Val Ser Ser Val Leu Arg Met Ser Leu Leu Gly Gly Met Tyr Lys Ala
100 105 110

Phe Ser Thr Cys Gly Ser His Leu Ser Val Val Ser Val Leu Trp His
115 120 125

Arg Phe Trp Gly Thr His Lys Leu Ser Thr Tyr
130 135

<210> 35
<211> 481
<212> DNA
<213> Rattus sp.

<220>
<221> misc_feature
<222> (212)..(253)
<223> n = unknown

<400> 35
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cccactctgt ggtccttacg tcgttgatta tctttctgc gagctgcccc tccttctgca 180
cctgttctgc acagatacat ctctgctgga gnnnnnnnnnnnnnnnnnnnnnnnnnnnn 240
nnnnnnnnnnnnnnnnnc ttctgattgt tcttcctac cttcgcatcc tggtggtgt 300
gataagaata gactcagctg agggcagaaa aaaggccctt tcaacttgtg cttcacactt 360
ggctgtggtg accatctact atggaacagg gctgatcagg tacttgaggc ccaagtccct 420
ttattccgct gagggagaca gactgatctc tgtgttctat gcagtcattg gccctgcact 480
g 481

<210> 36
<211> 160
<212> PRT

<213> Rattus sp.

<220>

<221> MISC_FEATURE
<222> (71)...(84)
<223> x = unknown

<400> 36

Ile Cys Tyr Pro Leu Arg Tyr Leu Leu Ile Met Ser Trp Val Val Cys
1 5 10 15

Thr Ala Leu Ser Val Ala Ile Trp Val Ile Gly Phe Cys Ala Ser Val
20 25 30

Ile Pro Leu Cys Phe Thr Ile Leu Pro Leu Cys Gly Pro Tyr Val Val
35 40 45

Asp Tyr Leu Phe Cys Glu Leu Pro Ile Leu Leu His Leu Phe Cys Thr
50 55 60

Asp Thr Ser Leu Leu Glu Xaa
65 70 75 80

Xaa Xaa Xaa Pro Phe Leu Leu Ile Val Leu Ser Tyr Leu Arg Ile
85 90 95

Leu Val Ala Val Ile Arg Ile Asp Ser Ala Glu Gly Arg Lys Lys Ala
100 105 110

Phe Ser Thr Cys Ala Ser His Leu Ala Val Val Thr Ile Tyr Tyr Gly
115 120 125

Thr Gly Leu Ile Arg Tyr Leu Arg Pro Lys Ser Leu Tyr Ser Ala Glu
130 135 140

Gly Asp Arg Leu Ile Ser Val Phe Tyr Ala Val Ile Gly Pro Ala Leu
145 150 155 160

<210> 37

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer directed to members of the 7 transmembrane domain protein

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superfamily

<220>
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<400> 37
aattggatnc tngtnaatct ngcngtngcn gcnga
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<210> 38
<211> 32
<212> DNA
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<213> Artificial Sequence

<220>
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      superfamily

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<223> n = any

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<400> 38
aattatttc tngtnaatct ngcnttngcn ga
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32

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<210> 39
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
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      superfamily

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<400>  39
aattnntta tnatntcnct ngcngngcn ga
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32

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superfamily

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<400> 40
cgnttnctna tgtgtaacct ntgctttgcn ga 32

<210> 41
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
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superfamily

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<400> 41
acngtnata tnacncatct nacnatngcn ga
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32

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<210> 42
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
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superfamily

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<400>  42
ctgnccgttc atnaanacat anatnatnngg gtt
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33

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<210>  43
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<213>  Artificial Sequence

<220>
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superfamily

<220>
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<223> n = any

<400> 43
gatcgtnag acaacaatan atnatnggg t          31

<210> 44
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
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superfamily

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<223> n = any

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<400> 44
tcnatgttaa angtngtata natnatnggg tt 32

<210> 45
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
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<223> n = any

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<400> 45
gccttngtaa anatngcata naggaanggg tt 32

<210> 46
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<220>
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<400> 46
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32

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<210> 47
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<212> DNA
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<220>
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superfamily

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<400> 47
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32

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<210> 48
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superfamily

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23

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<211> 29
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superfamily

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<210> 50
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<212> PRT
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<220>
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<400> 50

Lys Ile Val Ser Ser Ile
1 5

<210> 51
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Sequence motif found at the N-terminus of the cytoplasmic loop in certain odorant receptor protein clones

<400> 51

Arg Ile Val Ser Ser Ile
1 5

<210> 52
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Sequence motif found at the N-terminus of the cytoplasmic loop in certain odorant receptor protein clones

<400> 52

His Ile Thr Cys Ala Val
1 5

<210> 53
<211> 6
<212> PRT
<213> Artificial Sequence

<220>
<223> Sequence motif found at the N-terminus of the cytoplasmic loop in certain odorant receptor protein clones

<400> 53

His Ile Thr Trp Ala Val
1 5

<210> 54
<211> 19
<212> PRT
<213> Rattus sp.

<400> 54

Leu Ser Lys Glu Asp Cys Ser Gly Phe Ser Asp Val His Cys Gly Tyr
1 5 10 15

Ser Asp Ala

<210> 55
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Amino acid sequence for the loop between the first transmembrane domain and the second transmembrane domain, and the second transmembrane domain of an odorant receptor protein

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<400> 55

Leu Xaa Xaa Pro Met Tyr Xaa Phe Leu
1 5

<210> 56
<211> 9

<212> PRT
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<223> F or L

<400> 56

Leu Xaa Xaa Pro Met Tyr Xaa Phe Leu
1 5

<210> 57
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Amino acid sequence for the third transmembrane domain, and the l oop between the third transmembrane domain and the fourth transme brane domain of an odorant récepteur protein

<220>
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<400> 57

Met Xaa Tyr Asp Arg Xaa Xaa Ala Ile Cys
1 5 10

<210> 58

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence for the third transmembrane domain, and the loop between the third transmembrane domain and the fourth transmembrane domain of an odorant receptor protein

<220>

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<220>

<221> MISC_FEATURE

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<220>

<221> MISC_FEATURE

<222> (7)..(7)

<223> L or V

<400> 58

Met Xaa Tyr Asp Ala Xaa Xaa Ala Ile Cys
1 5 10

<210> 59

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Amino acid sequence for the third transmembrane domain, and the loop between the third transmembrane domain and the fourth transmembrane domain of an odorant receptor protein

<220>

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Asp Arg Xaa Xaa Ala Ile Cys
1 5

<210> 60
<211> 7
<212> PRT
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<220>
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<220>
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<223> F or Y

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> L or V

<400> 60

Asp Arg Xaa Xaa Ala Ile Cys
1 5

<210> 61
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Amino acid sequence for the loop between the fifth transmembrane domain and the sixth transmembrane domain, and the sixth transmembrane domain of an odorant receptor protein

<220>
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<223> K or R

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<220>
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<223> x = any

<220>
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<223> x = any

<400> 61
Xaa Xaa Phe Ser Thr Cys Xaa Ser His
1 5

<210> 62
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
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      domain and the sixth transmembrane domain, and the sixth transmem-
      brane domain of an odorant receptor protein

<220>
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<222> (1)..(1)
<223> K or R

<220>
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<223> A or I or S or V

<220>
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<223> A or G or S

<400> 62
Xaa Xaa Phe Ser Thr Cys Xaa Ser His
1 5

<210> 63
<211> 7
<212> PRT
<213> Artificial Sequence
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<220>
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<400> 63

Phe Ser Thr Cys Xaa Ser His
1 5

<210> 64
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<223> A or G or S

<400> 64

Phe Ser Thr Cys Xaa Ser His
1 5

<210> 65
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
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<220>
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<222> (2)..(2)
<223> x = any

<220>
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<222>  (3) .. (3)
<223>  x = any

<220>
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<223>  x = any

<220>
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<223>  x = any

<400>  65

Pro Xaa Xaa Asn Pro Xaa Ile Tyr Xaa Leu Arg Asn
1           5           10

<210>  66
<211>  12
<212>  PRT
<213>  Artificial Sequence

<220>
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C-terminal domain of an odorant receptor protein

<220>
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<222>  (2) .. (2)
<223>  M or L or V

<220>
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<222>  (3) .. (3)
<223>  F or L or V

<220>
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<222>  (6) .. (6)
<223>  F or I

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<222>  (9) .. (9)
<223>  C or S or T

<400>  66
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Pro Xaa Xaa Asn Pro Xaa Ile Tyr Xaa Leu Arg Asn
1 5 10

<210> 67
<211> 8
<212> PRT
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<220>
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<220>
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<220>
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<222> (6)..(6)
<223> x = any

<400> 67

Pro Xaa Xaa Asn Pro Xaa Ile Tyr
1 5

<210> 68
<211> 8
<212> PRT
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<220>
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<220>
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<223> M or L or V

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<223> F or L or V

<220>
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<223> F or !

<400> 68

Pro Xaa Xaa Asn Pro Xaa Ile Tyr
1 5

<210> 69
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
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<400> 69

Asn Pro Xaa Ile Tyr Xaa Leu Arg Asn
1 5

<210> 70
<211> 9
<212> PRT
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<220>
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<220>
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<223> F or I

<220>
<221> MISC_FEATURE

<222> (6)..(6)
<223> C or S or T

<400> 70

Asn Pro Xaa Ile Tyr Xaa Leu Arg Asn
1 5

<210> 71
<211> 333
<212> PRT
<213> Rattus sp.

<400> 71

Met Asp Ser Ser Asn Arg Thr Arg Val Ser Glu Phe Leu Leu Leu Gly
1 5 10 15

Phe Val Glu Asn Lys Asp Leu Gln Pro Leu Ile Tyr Gly Leu Phe Leu
20 25 30

Ser Met Tyr Leu Val Thr Val Ile Gly Asn Ile Ser Ile Ile Val Ala
35 40 45

Ile Ile Ser Asp Pro Cys Leu His Thr Pro Met Tyr Phe Phe Leu Ser
50 55 60

Asn Leu Ser Phe Val Asp Ile Cys Phe Ile Ser Thr Thr Val Pro Lys
65 70 75 80

Met Leu Val Asn Ile Gln Thr Gln Asn Asn Val Ile Thr Tyr Ala Gly
85 90 95

Cys Ile Thr Gln Ile Tyr Phe Phe Leu Leu Phe Cys Glu Leu Asp Asn
100 105 110

Phe Leu Leu Thr Ile Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
115 120 125

Pro Met His Tyr Thr Val Ile Met Asn Tyr Lys Leu Cys Gly Phe Leu
130 135 140

Val Leu Val Ser Trp Ile Val Ser Val Leu His Ala Leu Phe Gln Ser
145 150 155 160

Leu Met Met Leu Ala Leu Pro Phe Cys Thr His Leu Glu Ile Pro His
165 170 175

Tyr Phe Cys Glu Pro Asn Gln Val Ile Gln Leu Thr Cys Ser Asp Ala
180 185 190

Phe Leu Asn Asp Leu Val Ile Tyr Phe Thr Leu Val Leu Leu Ala Thr
195 200 205

Val Pro Leu Ala Gly Ile Phe Tyr Ser Tyr Phe Lys Ile Val Ser Ser
210 215 220

Ile Cys Ala Ile Ser Ser Val His Gly Lys Tyr Lys Ala Phe Ser Thr
225 230 235 240

Cys Ala Ser His Leu Ser Val Val Ser Leu Phe Tyr Cys Thr Gly Leu
245 250 255

Gly Val Tyr Leu Ser Ser Ala Ala Asn Asn Ser Ser Gln Ala Ser Ala
260 265 270

Thr Ala Ser Val Met Tyr Thr Val Val Thr Pro Met Val Asn Pro Phe
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Ser Val Leu Lys Lys Thr
290 295 300

Leu Cys Glu Glu Val Ile Arg Ser Pro Pro Ser Leu Leu His Phe Phe
305 310 315 320

Leu Val Leu Cys His Leu Pro Cys Phe Ile Phe Cys Tyr
325 330

<210> 72
<211> 313
<212> PRT
<213> Rattus sp.

<400> 72

Met Ser Ser Thr Asn Gln Ser Ser Val Thr Glu Phe Leu Leu Leu Gly
1 5 10 15

Leu Ser Arg Gln Pro Gln Gln Gln Leu Leu Phe Leu Leu Phe Leu
20 25 30

Ile Met Tyr Leu Ala Thr Val Leu Gly Asn Leu Leu Ile Ile Leu Ala
35 40 45

Ile Gly Thr Asp Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Ser
50 55 60

Asn Leu Ser Phe Val Asp Val Cys Phe Ser Ser Thr Thr Val Pro Lys
65 70 75 80

Val Leu Ala Asn His Ile Leu Gly Ser Gln Ala Ile Ser Phe Ser Gly
85 90 95

Cys Leu Thr Gln Leu Tyr Phe Leu Ala Val Phe Gly Asn Met Asp Asn
100 105 110

Phe Leu Leu Ala Val Met Ser Tyr Asp Arg Phe Val Ala Ile Cys His
115 120 125

Pro Leu His Tyr Thr Lys Met Thr Arg Gln Leu Cys Val Leu Leu
130 135 140

Val Val Gly Ser Trp Val Val Ala Asn Met Asn Cys Leu Leu His Ile
145 150 155 160

Leu Leu Met Ala Arg Leu Ser Phe Cys Ala Ser Asn Met Ile Pro His
165 170 175

Phe Phe Cys Asp Gly Thr Pro Leu Leu Lys Leu Ser Cys Ser Asp Thr
180 185 190

His Leu Asn Glu Leu Met Ile Leu Thr Glu Gly Ala Val Val Met Val
195 200 205

Thr Pro Phe Val Cys Ile Leu Ile Ser Tyr Ile His Ile Thr Cys Ala
210 215 220

Val Leu Arg Val Ser Ser Pro Arg Gly Gly Trp Lys Ser Phe Ser Thr
225 230 235 240

Cys Gly Ser His Leu Ala Val Val Cys Leu Phe Tyr Gly Thr Val Ile
245 250 255

Ala Val Tyr Phe Asn Pro Ser Ser Ser His Leu Ala Gly Arg Asp Met
260 265 270

Ala Ala Ala Val Met Tyr Ala Val Val Thr Pro Met Leu Asn Pro Phe
275 280 285

Ile Tyr Ser Leu Arg Asn Ser Asp Met Lys Ala Ala Leu Arg Lys Val
290 295 300

Leu Ala Met Arg Phe Pro Ser Lys Gln
305 310

<210> 73
<211> 311
<212> PRT
<213> Rattus sp.

<400> 73

Met Ala Trp Ser Thr Gly Gln Asn Leu Ser Thr Pro Gly Pro Phe Ile
1 5 10 15

Leu Leu Gly Phe Pro Gly Pro Arg Ser Met Arg Ile Gly Leu Phe Leu
20 25 30

Leu Phe Leu Val Met Tyr Leu Leu Thr Val Val Gly Asn Leu Ala Ile
35 40 45

Ile Ser Leu Val Gly Ala His Arg Cys Leu Gln Thr Pro Met Tyr Phe
50 55 60

Phe Leu Cys Asn Leu Ser Phe Leu Glu Ile Trp Phe Thr Thr Ala Cys
65 70 75 80

Val Pro Lys Thr Leu Ala Thr Phe Ala Pro Arg Gly Gly Val Ile Ser
85 90 95

Leu Ala Gly Cys Ala Thr Gln Met Tyr Phe Val Phe Ser Leu Gly Cys
100 105 110

Thr Glu Tyr Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Leu Ala
115 120 125

Ile Cys Leu Pro Leu Arg Tyr Gly Gly Ile Met Thr Pro Gly Leu Ala

130

135

140

Met Arg Leu Ala Leu Gly Ser Trp Leu Cys Gly Phe Ser Ala Ile Thr
145 150 155 160

Val Pro Ala Thr Leu Ile Ala Arg Leu Ser Phe Cys Gly Ser Arg Val
165 170 175

Ile Asn His Phe Phe Cys Asp Ile Ser Pro Trp Ile Val Leu Ser Cys
180 185 190

Thr Asp Thr Gln Val Val Glu Leu Val Ser Phe Gly Ile Ala Phe Cys
195 200 205

Val Ile Leu Gly Ser Cys Gly Ile Thr Leu Val Ser Tyr Ala Tyr Ile
210 215 220

Ile Thr Thr Ile Ile Lys Ile Pro Ser Ala Arg Gly Arg His Arg Ala
225 230 235 240

Phe Ser Thr Cys Ser Ser His Leu Thr Val Val Leu Ile Trp Tyr Gly
245 250 255

Ser Thr Ile Phe Leu His Val Arg Thr Ser Val Glu Ser Ser Leu Asp
260 265 270

Leu Thr Lys Ala Ile Thr Val Leu Asn Thr Ile Val Thr Pro Val Leu
275 280 285

Asn Pro Phe Ile Tyr Thr Leu Arg Asn Lys Asp Val Lys Glu Ala Leu
290 295 300

Arg Arg Thr Val Lys Gly Lys
305 310

<210> 74
<211> 317
<212> PRT
<213> Rattus sp.

<400> 74

Met Glu Ser Gly Asn Ser Thr Arg Arg Phe Ser Ser Phe Phe Leu Leu
1 5 10 15

Gly Phe Thr Glu Asn Pro Gln Leu His Phe Leu Ile Phe Ala Leu Phe
20 25 30

Leu Ser Met Tyr Leu Val Thr Val Leu Gly Asn Leu Leu Ile Ile Met
35 40 45

Ala Ile Ile Thr Gln Ser His Leu His Thr Pro Met Tyr Phe Phe Leu
50 55 60

Ala Asn Leu Ser Phe Val Asp Ile Cys Phe Thr Ser Thr Thr Ile Pro
65 70 75 80

Lys Met Leu Val Asn Ile Tyr Thr Gln Ser Lys Ser Ile Thr Tyr Glu
85 90 95

Asp Cys Ile Ser Gln Met Cys Val Phe Leu Val Phe Ala Glu Leu Gly
100 105 110

Asn Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Val Ala Asn Cys
115 120 125

His Pro Leu Cys Tyr Thr Val Ile Val Asn His Arg Leu Cys Ile Leu
130 135 140

Leu Leu Leu Leu Ser Trp Val Ile Ser Ile Phe His Ala Phe Ile Gln
145 150 155 160

Ser Leu Ile Val Leu Gln Leu Thr Phe Cys Gly Asp Val Lys Ile Pro
165 170 175

His Phe Phe Cys Glu Leu Asn Gln Leu Ser Gln Leu Thr Cys Ser Asp
180 185 190

Asn Phe Pro Ser His Leu Ile Met Asn Leu Val Pro Val Met Leu Ala
195 200 205

Ala Ile Ser Phe Ser Gly Ile Leu Tyr Ser Tyr Phe Lys Ile Val Ser
210 215 220

Ser Ile His Ser Ile Ser Thr Val Gln Gly Lys Tyr Lys Ala Phe Ser
225 230 235 240

Thr Cys Ala Ser His Leu Ser Ile Val Ser Leu Phe Tyr Ser Thr Gly
245 250 255

Leu Gly Val Tyr Val Ser Ser Ala Val Val Gln Ser Ser His Ser Ala
260 265 270

Ala Ser Ala Ser Val Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro
275 280 285

Phe Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Arg Ala Leu Glu Arg
290 295 300

Leu Leu Glu Gly Asn Cys Lys Val His His Trp Thr Gly
305 310 315

<210> 75
<211> 310
<212> PRT
<213> Rattus sp.

<400> 75

Met Asn Asn Gln Thr Phe Ile Thr Gln Phe Leu Leu Leu Gly Leu Pro
1 5 10 15

Ile Pro Glu Glu His Gln His Leu Phe Tyr Ala Leu Phe Leu Val Met
20 25 30

Tyr Leu Thr Thr Ile Leu Gly Asn Leu Leu Ile Ile Val Leu Val Gln
35 40 45

Leu Asp Ser Gln Leu His Thr Pro Met Tyr Leu Phe Leu Ser Asn Leu
50 55 60

Ser Phe Ser Asp Leu Cys Phe Ser Ser Val Thr Met Pro Lys Leu Leu
65 70 75 80

Gln Asn Met Arg Ser Gln Asp Thr Ser Ile Pro Tyr Gly Gly Cys Leu
85 90 95

Ala Gln Thr Tyr Phe Phe Met Val Phe Gly Asp Met Glu Ser Phe Leu
100 105 110

Leu Val Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Phe Pro Leu
115 120 125

His Tyr Thr Ser Ile Met Ser Pro Lys Leu Cys Thr Cys Leu Val Leu
130 135 140

Leu Leu Trp Met Leu Thr Thr Ser His Ala Met Met His Thr Leu Leu
145 150 155 160

Ala Ala Arg Leu Ser Phe Cys Glu Asn Asn Val Val Leu Asn Phe Phe
165 170 175

Cys Asp Leu Phe Val Leu Leu Lys Leu Ala Cys Ser Asp Thr Tyr Ile
180 185 190

Asn Glu Leu Met Ile Phe Ile Met Ser Thr Leu Leu Ile Ile Ile Pro
195 200 205

Phe Phe Leu Ile Val Met Ser Tyr Ala Arg Ile Ile Ser Ser Ile Leu
210 215 220

Lys Val Pro Ser Thr Gln Gly Ile Cys Leu Val Phe Ser Thr Cys Gly
225 230 235 240

Ser His Leu Ser Val Val Ser Leu Phe Tyr Gly Thr Ile Ile Gly Leu
245 250 255

Tyr Leu Cys Pro Ala Gly Asn Asn Ser Thr Val Lys Glu Met Val Met
260 265 270

Ala Met Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro Phe Ile Tyr
275 280 285

Ser Leu Arg Asn Arg Asp Met Lys Arg Ala Leu Ile Arg Val Ile Cys
290 295 300

Ser Met Lys Ile Thr Leu
305 310

<210> 76
<211> 327
<212> PRT
<213> Rattus sp.

<400> 76

Met Glu Arg Arg Asn His Ser Gly Arg Val Ser Glu Phe Val Leu Leu
1 5 10 15

Gly Phe Pro Ala Pro Ala Pro Leu Arg Val Leu Leu Phe Phe Leu Ser
20 25 30

Leu Leu Asp Tyr Val Leu Val Leu Thr Glu Asn Met Leu Ile Ile Ile
35 40 45

Ala Ile Arg Asn His Pro Thr Leu His Lys Pro Met Tyr Phe Phe Leu
50 55 60

Ala Asn Met Ser Phe Leu Glu Ile Trp Tyr Val Thr Val Thr Ile Pro
65 70 75 80

Lys Met Leu Ala Gly Phe Ile Gly Ser Lys Glu Asn His Gly Gln Leu
85 90 95

Ile Ser Phe Glu Ala Cys Met Thr Gln Leu Tyr Phe Phe Leu Gly Leu
100 105 110

Gly Cys Thr Glu Cys Val Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr
115 120 125

Val Ala Ile Cys His Pro Leu His Tyr Pro Val Ile Val Ser Ser Arg
130 135 140

Leu Cys Val Gln Met Ala Ala Gly Ser Trp Ala Gly Gly Phe Gly Ile
145 150 155 160

Ser Met Val Lys Val Phe Leu Ile Ser Arg Leu Ser Tyr Cys Gly Pro
165 170 175

Asn Thr Ile Asn His Phe Phe Cys Asp Val Ser Pro Leu Leu Asn Leu
180 185 190

Ser Cys Thr Asp Met Ser Thr Ala Glu Leu Thr Asp Phe Val Leu Ala
195 200 205

Ile Phe Ile Leu Leu Gly Pro Leu Ser Val Thr Gly Ala Ser Tyr Met
210 215 220

Ala Ile Thr Gly Ala Val Met Arg Ile Pro Ser Ala Ala Gly Arg His

225 230 235 240

Lys Ala Phe Ser Thr Cys Ala Ser His Leu Thr Val Val Ile Ile Phe
245 250 255

Tyr Ala Ala Ser Ile Phe Ile Tyr Ala Arg Pro Lys Ala Leu Ser Ala
260 265 270

Phe Asp Thr Asn Lys Leu Val Ser Val Leu Tyr Ala Val Ile Val Pro
275 280 285

Leu Phe Asn Pro Ile Ile Tyr Cys Leu Arg Asn Gln Asp Val Lys Arg
290 295 300

Ala Leu Arg Arg Thr Leu His Leu Ala Gln Asp Gln Glu Ala Asn Thr
305 310 315 320

Asn Lys Gly Ser Lys Ile Gly
325

<210> 77
<211> 312
<212> PRT
<213> Rattus sp.

<400> 77

Met Asn Asn Lys Thr Val Ile Thr His Phe Leu Leu Leu Gly Leu Pro
1 5 10 15

Ile Pro Pro Glu His Gln Gln Leu Phe Phe Ala Leu Phe Leu Ile Met
20 25 30

Tyr Leu Thr Thr Phe Leu Gly Asn Leu Leu Ile Val Val Leu Val Gln
35 40 45

Leu Asp Ser His Leu His Thr Pro Met Tyr Leu Pro Leu Ser Asn Leu
50 55 60

Ser Phe Ser Asp Leu Cys Phe Ser Ser Val Thr Met Leu Lys Leu Leu
65 70 75 80

Gln Asn Ile Gln Ser Gln Val Pro Ser Ile Ser Tyr Ala Gly Cys Leu
85 90 95

Thr Gln Ile Phe Phe Leu Leu Phe Gly Tyr Leu Gly Asn Phe Leu
100 105 110

Leu Val Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Phe Pro Leu
115 120 125

His Tyr Thr Asn Ile Met Ser His Lys Leu Cys Thr Cys Leu Leu Leu
130 135 140

Asn Phe Trp Ile Met Thr Ser Ser His Ala Met Met His Thr Leu Leu
145 150 155 160

Ala Ala Arg Leu Ser Phe Cys Glu Asn Asn Val Leu Leu Asn Phe Phe
165 170 175

Cys Asp Leu Phe Val Leu Leu Lys Leu Ala Cys Ser Asp Thr Tyr Val
180 185 190

Asn Glu Leu Met Ile His Ile Met Gly Val Ile Ile Ile Val Ile Pro
195 200 205

Phe Val Leu Ile Val Ile Ser Tyr Ala Lys Ile Ile Ser Ser Ile Leu
210 215 220

Lys Val Pro Ser Thr Gln Ser Ile His Lys Val Phe Ser Thr Cys Gly
225 230 235 240

Ser His Leu Ser Val Val Ser Leu Phe Tyr Gly Thr Ile Ile Gly Leu
245 250 255

Tyr Leu Cys Pro Ser Gly Asp Asn Phe Ser Leu Lys Gly Ser Ala Met
260 265 270

Ala Met Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro Phe Ile Tyr
275 280 285

Ser Leu Arg Asn Arg Asp Met Lys Gln Ala Leu Ile Arg Val Thr Cys
290 295 300

Ser Lys Lys Ile Ser Leu Pro Trp
305 310

<210> 78
<211> 314
<212> PRT
<213> Rattus sp.

<400> 78

Met Thr Arg Arg Asn Gln Thr Ala Ile Ser Gln Phe Phe Leu Leu Gly
1 5 10 15

Leu Pro Phe Pro Pro Glu Tyr Gln His Leu Phe Tyr Ala Leu Phe Leu
20 25 30

Ala Met Tyr Leu Thr Thr Leu Leu Gly Asn Leu Ile Ile Ile Ile Leu
35 40 45

Ile Leu Leu Asp Ser His Leu His Thr Pro Met Tyr Leu Phe Leu Ser
50 55 60

Asn Leu Ser Phe Ala Asp Leu Cys Phe Ser Ser Val Thr Met Pro Lys
65 70 75 80

Leu Leu Gln Asn Met Gln Ser Gln Val Pro Ser Ile Pro Tyr Ala Gly
85 90 95

Cys Leu Ala Gln Ile Tyr Phe Phe Leu Phe Phe Gly Asp Leu Gly Asn
100 105 110

Phe Leu Leu Val Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Phe
115 120 125

Pro Leu His Tyr Met Ser Ile Met Ser Pro Lys Leu Cys Val Ser Leu
130 135 140

Val Val Leu Ser Trp Val Leu Thr Thr Phe His Ala Met Leu His Thr
145 150 155 160

Leu Leu Met Ala Arg Leu Ser Phe Cys Glu Asp Ser Val Ile Pro His
165 170 175

Tyr Phe Cys Asp Met Ser Thr Leu Leu Lys Val Ala Cys Ser Asp Thr
180 185 190

His Asp Asn Glu Leu Ala Ile Phe Ile Leu Gly Gly Pro Ile Val Val
195 200 205

Leu Pro Phe Leu Leu Ile Ile Val Ser Tyr Ala Arg Ile Val Ser Ser
210 215 220

Ile Phe Lys Val Pro Ser Ser Gln Ser Ile His Lys Ala Phe Ser Thr
225 230 235 240

Cys Gly Ser His Leu Ser Val Val Ser Leu Phe Tyr Gly Thr Val Ile
245 250 255

Gly Leu Tyr Leu Cys Pro Ser Ala Asn Asn Ser Thr Val Lys Glu Thr
260 265 270

Val Met Ser Leu Met Tyr Thr Met Val Thr Pro Met Leu Asn Pro Phe
275 280 285

Ile Tyr Ser Leu Arg Asn Arg Asp Ile Lys Asp Ala Leu Glu Lys Ile
290 295 300

Met Cys Lys Lys Gln Ile Pro Ser Phe Leu
305 310

<210> 79
<211> 312
<212> PRT
<213> Rattus sp.

<400> 79

Met Thr Gly Asn Asn Gln Thr Leu Ile Leu Glu Phe Leu Leu Gly
1 5 10 15

Leu Pro Ile Pro Ser Glu Tyr His Leu Leu Phe Tyr Ala Leu Phe Leu
20 25 30

Ala Met Tyr Leu Thr Ile Ile Leu Gly Asn Leu Leu Ile Ile Val Leu
35 40 45

Val Arg Leu Asp Ser His Leu His Met Pro Met Tyr Leu Phe Leu Ser
50 55 60

Asn Leu Ser Phe Ser Asp Leu Cys Pro Ser Ser Val Thr Met Pro Lys
65 70 75 80

Leu Leu Gln Asn Met Gln Ser Gln Val Pro Ser Ile Ser Tyr Thr Gly
85 90 95

Cys Leu Thr Gln Leu Tyr Phe Phe Met Val Phe Gly Asp Met Glu Ser
100 105 110

Phe Leu Leu Val Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Phe
115 120 125

Pro Leu Arg Tyr Thr Thr Ile Met Ser Thr Lys Phe Cys Ala Ser Leu
130 135 140

Val Leu Leu Leu Trp Met Leu Thr Met Thr His Ala Leu Leu His Thr
145 150 155 160

Leu Leu Ile Ala Arg Leu Ser Phe Cys Glu Lys Asn Val Ile Leu His
165 170 175

Phe Phe Cys Asp Ile Ser Ala Leu Leu Lys Leu Ser Cys Ser Asp Ile
180 185 190

Tyr Val Asn Glu Leu Met Ile Tyr Ile Leu Gly Gly Leu Ile Ile Ile
195 200 205

Ile Pro Phe Leu Leu Ile Val Met Ser Tyr Val Arg Ile Phe Phe Ser
210 215 220

Ile Leu Lys Phe Pro Ser Ile Gln Asp Ile Tyr Lys Val Phe Ser Thr
225 230 235 240

Cys Gly Ser His Leu Ser Val Val Thr Leu Phe Tyr Gly Thr Ile Phe
245 250 255

Gly Ile Tyr Leu Cys Pro Ser Gly Asn Asn Ser Thr Val Lys Glu Ile
260 265 270

Ala Met Ala Met Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro Phe
275 280 285

Ile Tyr Ser Leu Arg Asn Arg Asp Met Lys Arg Ala Leu Ile Arg Val
290 295 300

Ile Cys Thr Lys Lys Ile Ser Leu

305

310

<210> 80
<211> 314
<212> PRT
<213> Rattus sp.

<400> 80

Met Thr Glu Glu Asn Gln Thr Val Ile Ser Gln Phe Leu Leu Leu Phe
1 5 10 15

Leu Pro Ile Pro Ser Glu His Gln His Val Phe Tyr Ala Leu Phe Leu
20 25 30

Ser Met Tyr Leu Thr Thr Val Leu Gly Asn Leu Ile Ile Ile Ile Leu
35 40 45

Ile His Leu Ala Ser His Leu His Thr Pro Met Tyr Leu Phe Leu Ser
50 55 60

Asn Leu Ser Phe Ser Asp Leu Cys Phe Ser Ser Val Thr Met Pro Lys
65 70 75 80

Leu Leu Gln Asn Met Gln Ser Gln Val Pro Ser Ile Pro Phe Ala Gly
85 90 95

Cys Leu Thr Gln Leu Tyr Phe Tyr Leu Tyr Phe Ala Asp Leu Glu Ser
100 105 110

Phe Leu Leu Val Ala Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Phe
115 120 125

Pro Leu His Tyr Met Ser Ile Met Ser Pro Tyr Leu Cys Val Ser Leu
130 135 140

Val Val Leu Ser Trp Val Leu Thr Thr Phe His Ala Met Leu His Thr
145 150 155 160

Leu Leu Met Ala Arg Leu Ser Phe Cys Ala Asp Asn Met Ile Pro His
165 170 175

Phe Phe Cys Asp Ile Ser Pro Leu Leu Lys Leu Ser Cys Ser Asp Thr
180 185 190

21
Cont

His Val Asn Glu Leu Val Ile Phe Val Met Gly Gly Leu Val Ile Val
195 200 205

Ile Pro Phe Val Leu Ile Ile Val Ser Tyr Ala Arg Val Val Ala Ser
210 215 220

Ile Leu Lys Val Pro Ser Val Arg Gly Ile His Lys Ile Phe Ser Thr
225 230 235 240

Cys Gly Ser His Leu Ser Val Val Ser Leu Phe Tyr Gly Thr Ile Ile
245 250 255

Gly Leu Tyr Leu Cys Pro Ser Ala Asn Asn Ser Thr Val Lys Glu Thr
260 265 270

Val Met Ala Met Met Tyr Thr Val Val Thr Pro Met Leu Asn Pro Phe
275 280 285

Ile Tyr Ser Leu Arg Asn Arg Asp Met Lys Glu Ala Leu Ile Arg Val
290 295 300

Leu Cys Lys Lys Ile Thr Phe Cys Leu
305 310

<210> 81
<211> 44
<212> PRT
<213> Rattus sp.

C
Cont
<400> 81

Arg Val Asn Glu Val Val Ile Phe Ile Val Val Ser Leu Phe Leu Val
1 5 10 15

Leu Pro Phe Ala Leu Ile Ile Met Ser Tyr Val Arg Ile Val Ser Ser
20 25 30

Ile Leu Lys Val Pro Ser Ser Gln Gly Ile Tyr Lys
35 40

<210> 82
<211> 44
<212> PRT
<213> Rattus sp.

<400> 82

Phe Leu Asn Asp Leu Val Ile Tyr Phe Thr Leu Val Leu Leu Ala Thr
1 5 10 15

Val Pro Leu Ala Gly Ile Phe Tyr Ser Tyr Phe Lys Ile Val Ser Ser
20 25 30

Ile Cys Ala Ile Ser Ser Val His Gly Lys Tyr Lys
35 40

<210> 83

<211> 44

<212> PRT

<213> Rattus sp.

<400> 83

His Leu Asn Glu Leu Met Ile Leu Thr Glu Gly Ala Val Val Met Thr
1 5 10 15

Pro Phe Val Cys Ile Leu Ile Ser Tyr Ile His Ile Thr Cys Ala Val
20 25 30

Val Leu Arg Val Ser Ser Pro Arg Gly Gly Trp Lys
35 40

<210> 84

<211> 44

<212> PRT

<213> Rattus sp.

<400> 84

Gln Val Val Glu Leu Val Ser Phe Gly Ile Ala Phe Cys Val Ile His
1 5 10 15

Gly Ser Cys Gly Ile Thr Leu Val Ser Tyr Ala Tyr Ile Ile Thr Thr
20 25 30

Ile Ile Lys Ile Pro Ser Ala Arg Gly Arg His Arg
35 40

<210> 85

<211> 44

<212> PRT

<213> Rattus sp.

C
CMT

<400> 85

His Val Asn Glu Leu Val Ile Phe Val Met Gly Gly Ile Ile Leu Val
1 5 10 15

Ile Pro Phe Val Leu Ile Ile Val Ser Tyr Val Arg Ile Val Ser Ser
20 25 30

Ile Leu Lys Val Pro Ser Ala Arg Gly Ile Arg Lys
35 40

<210> 86

<211> 44

<212> PRT

<213> Rattus sp.

<400> 86

Phe Pro Ser His Leu Thr Met His Leu Val Pro Val Ile Leu Ala Ala
1 5 10 15

Ile Ser Leu Ser Gly Ile Leu Tyr Ser Tyr Phe Lys Ile Val Ser Ser
20 25 30

Ile Arg Ser Met Ser Ser Val Gln Gly Lys Tyr Lys
35 40

<210> 87

<211> 44

<212> PRT

<213> Rattus sp.

<400> 87

Phe Pro Ser His Leu Ile Met Asn Leu Val Pro Val Met Leu Ala Ala
1 5 10 15

C
CMT
Ile Ser Phe Ser Gly Ile Leu Tyr Ser Tyr Phe Lys Ile Val Ser Ser
20 25 30

Ile His Ser Ile Ser Thr Val Gln Gly Lys Tyr Lys
35 40

<210> 88

<211> 44

<212> PRT

<213> Rattus sp.

<400> 88

Phe Pro Ser His Leu Ile Met Asn Leu Val Pro Val Met Leu Ala Ala
1 5 10 15

Ile Ser Phe Ser Gly Ile Leu Tyr Ser Tyr Phe Lys Ile Val Ser Ser
20 25 30

Ile Arg Ser Val Ser Ser Val Lys Gly Lys Tyr Lys
35 40

<210> 89

<211> 44

<212> PRT

<213> Rattus sp.

<400> 89

Phe Leu Asn Asp Val Ile Met Tyr Phe Ala Leu Val Leu Leu Ala Val
1 5 10 15

Val Pro Leu Leu Gly Ile Leu Tyr Ser Tyr Ser Lys Ile Val Ser Ser
20 25 30

Ile Arg Ala Ile Ser Thr Val Gln Gly Lys Tyr Lys
35 40

<210> 90

<211> 44

<212> PRT

<213> Rattus sp.

<400> 90

His Glu Ile Glu Met Ile Ile Leu Val Leu Ala Ala Phe Asn Leu Ile
1 5 10 15

Ser Ser Leu Leu Val Val Leu Val Ser Tyr Leu Phe Ile Leu Ile Ala
20 25 30

Ile Leu Arg Met Asn Ser Ala Glu Gly Arg Arg Lys
35 40

<210> 91

<211> 44

<212> PRT

<213> Rattus sp.

C
Cmt

<400> 91

Tyr Ile Asn Glu Leu Met Ile Phe Ile Met Ser Thr Leu Leu Ile Ile
1 5 10 15

Ile Pro Phe Phe Leu Ile Val Met Ser Tyr Ala Arg Ile Ile Ser Ser
20 25 30

Ile Leu Lys Val Pro Ser Thr Gln Gly Ile Cys Lys
35 40

<210> 92

<211> 44

<212> PRT

<213> Rattus sp.

<400> 92

Ser Thr Ala Glu Leu Thr Asp Phe Val Leu Ala Ile Phe Ile Leu Leu
1 5 10 15

Gly Pro Leu Ser Val Thr Gly Ala Ser Tyr Met Ala Ile Thr Gly Ala
20 25 30

Val Met Arg Ile Pro Ser Ala Ala Gly Arg His Lys
35 40

<210> 93

<211> 44

<212> PRT

<213> Rattus sp.

<400> 93

Tyr Val Asn Glu Leu Met Ile His Ile Met Gly Val Ile Ile Ile Val
1 5 10 15

Ile Pro Phe Val Leu Ile Val Ile Ser Tyr Ala Lys Ile Ile Ser Ser
20 25 30

Ile Leu Lys Val Pro Ser Thr Gln Ser Ile His Lys
35 40

<210> 94

<211> 44

<212> PRT

<213> Rattus sp.

C
CMT

<400> 94

His Asp Asn Glu Leu Ala Ile Phe Ile Leu Gly Gly Pro Ile Val Val
1 5 10 15

Leu Pro Phe Leu Leu Ile Ile Val Ser Tyr Ala Arg Ile Val Ser Ser
20 25 30

Ile Phe Lys Val Pro Ser Ser Gln Ser Ile His Lys
35 40

<210> 95

<211> 44

<212> PRT

<213> Rattus sp.

<400> 95

His Leu Asn Glu Leu Met Ile Leu Thr Glu Gly Ala Val Val Met Val
1 5 10 15

Thr Pro Phe Val Cys Ile Leu Ile Ser Tyr Ile His Ile Thr Trp Ala
20 25 30

Val Leu Arg Val Ser Ser Pro Arg Gly Gly Trp Lys
35 40

<210> 96

<211> 44

<212> PRT

<213> Rattus sp.

<400> 96

Phe Pro Ser His Leu Ile Met Asn Leu Val Pro Val Met Leu Gly Ala
1 5 10 15

Ile Ser Leu Ser Gly Ile Leu Tyr Ser Tyr Phe Lys Ile Val Ser Ser
20 25 30

Val Arg Ser Ile Ser Ser Val Gln Gly Lys His Lys
35 40

<210> 97

<211> 44

<212> PRT

<213> Rattus sp.

C
Cmt

<400> 97

Tyr Val Asn Glu Leu Met Ile Tyr Ile Leu Gly Gly Leu Ile Ile Ile
1 5 10 15

Ile Pro Phe Leu Leu Ile Val Met Ser Tyr Val Arg Ile Phe Phe Ser
20 25 30

Ile Leu Lys Phe Pro Ser Ile Glx Asp Ile Tyr Lys
35 40

<210> 98

<211> 44

<212> PRT

<213> Rattus sp.

<400> 98

His Val Asn Glu Leu Val Ile Phe Val Met Gly Gly Leu Val Ile Val
1 5 10 15

C) Ile Pro Phe Val Leu Ile Ile Val Ser Tyr Ala Arg Val Val Ala Ser
20 25 30

Ile Leu Lys Val Pro Ser Val Arg Gly Ile His Lys
35 40
